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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CHURNET, DARGAYE H	
ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/662,583	BHARDWAJ, SANJAY	
	Examiner	Art Unit	
	DARGAYE H. CHURNET	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *24* is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 17, 2009 has been entered.

Claim Rejections - 35 USC § 103

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, 7, 21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (cited 2003/0152076) in view of Nelson (cited 6,882,654).

For claim 1, Lee discloses an apparatus for processing an encapsulation packet including an encapsulating header and an encapsulated packet, comprising: a data pipeline having an input for receiving the encapsulation packet formatted as a sequence of parallel data segments (see paragraph [0076], lines 6-11, wherein the parallel data segments of the incoming packet are inputted to a data pipeline), said data pipeline including a plurality of pipeline stages (see paragraph [0078], lines 1-2, wherein the pipeline comprises a plurality of pipeline stages), each said pipeline stage for holding therein successive ones of said data segments (see paragraph [0078], lines 2-4, wherein the data segments are stored in the pipeline stages); a modifier coupled to said data pipeline (see paragraph [0188], lines 1-2, protocol translator unit 315); and selection logic (see fig. 13, displaying the selection logic between pipeline stages) coupled between said data pipeline and said modifier, said selection logic having an input for receiving selectively programmable second information indicative of a location of said first information within said encapsulated packet (see paragraph [0188], lines 5-7, wherein the second information is the number of bytes to be removed), said selection logic responsive to said second information for routing said first information from said data pipeline to said modifier (see fig. 11, displaying the packet between pipeline stages routed after the packet header is stripped based on the POPOFF field).

Lee fails to disclose replacing a portion of said encapsulating header with first information contained in said encapsulated packet. Nelson from the same or similar

fields of endeavor teach replacing a portion of said encapsulating header with first information contained in said encapsulated packet (see col. 7, lines 28-29, the encapsulation data replaces the original header). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to incorporate the elements above stated by Nelson in the network of Lee. The method taught by Nelson is modified/implemented into the network of Lee by replacing header information with encapsulated data. The motivation for replacing a portion of said encapsulating header with first information contained in said encapsulated packet is to update the packet.

For claim 21, Lee discloses a method of processing an encapsulation packet including an encapsulating header and an encapsulated packet, comprising: receiving the encapsulation packet formatted as a sequence of parallel data segments (see paragraph [0076], lines 6-11, wherein the parallel data segments of the incoming packet are inputted to a data pipeline); receiving selectively programmable first information indicative of a location of second information within said encapsulated packet (see paragraph [0188], lines 5-7, wherein the second information is the number of bytes to be removed); based on said first information, obtaining said second information from said encapsulated packet (see paragraph [0188], lines 5-7, wherein the second information is the number of bytes to be removed based on the POPOFF field).

Lee fails to disclose replacing a portion of said encapsulating header with said second information. Nelson from the same or similar fields of endeavor teach replacing a portion of said encapsulating header with said second information (see col. 7, lines

28-29, the encapsulation data replaces the original header). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to incorporate the elements above stated by Nelson in the network of Lee. The method taught by Nelson is modified/implemented into the network of Lee by replacing header information with encapsulated data. The motivation for replacing a portion of said encapsulating header with said second information is to update the packet.

For claim 23, Lee discloses an apparatus for processing an encapsulation packet including an encapsulating header and an encapsulated packet, comprising: means for receiving the encapsulation packet formatted as a sequence of parallel data segments (see paragraph [0076], lines 6-11, wherein the parallel data segments of the incoming packet are inputted to a data pipeline); means for receiving selectively programmable first information indicative of a location of second information within said encapsulated packet (see paragraph [0188], lines 5-7, wherein the second information is the number of bytes to be removed); means for obtaining said second information from said encapsulated packet based on said first information (see paragraph [0188], lines 5-7, wherein the second information is the number of bytes to be removed based on the POPOFF field).

Lee fails to disclose means for replacing a portion of said encapsulating header with said second information. Nelson from the same or similar fields of endeavor teach means for replacing a portion of said encapsulating header with said second information (see col. 7, lines 28-29, the encapsulation data replaces the original header). Thus, it

would have been obvious to the person of ordinary skill in the art at the time of the invention to incorporate the elements above stated by Nelson in the network of Lee. The method taught by Nelson is modified/implemented into the network of Lee by replacing header information with encapsulated data. The motivation for a means for replacing a portion of said encapsulating header with said second information is to update the packet.

For claim 2, Lee discloses said modifier is for removing header information from said encapsulating header (see paragraph [0188], lines 1-5, wherein the modifying is stripping header information).

For claim 3, Lee discloses said modifier is for replacing said removed header information with said first-mentioned information (see paragraph [0188], lines 1-5, wherein the modifying is stripping header information based on the offset which provides the starting point for removing bytes).

For claim 4, Lee discloses said selection logic (see fig. 13, displaying the protocol translator unit within the execution stage of the pipeline, the protocol translator unit performing the packet header modification) includes a selector (see fig. 13, Mixer 446) having an input coupled to said pipeline and having an output, and a shifter (see fig. 13, Rotator 440) having an input coupled to said selector output and having an output

coupled to said modifier (see fig. 13, Mixer 438 and paragraph [0193], describing the path to the Mixer 436 which performs the header stripping).

For claim 5, Lee discloses said modifier includes a selector (see fig. 13, Mixer 438) having an input coupled to said pipeline (see fig. 13, path from Encapsulation Data 456 to the Mixer 438) and to said out of said shifter (see fig. 13, path from Rotator 440 to Mixer 438).

For claim 7, Lee discloses said first information includes address information (see paragraph [0194], lines 4-9, wherein the strip offset field includes address information).

4. Claims 13-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (cited 2003/0152076) in view of Sayegh (cited 5,293,330).

For claim 13, Lee discloses an apparatus for processing an encapsulation packet including an encapsulating header and an encapsulated packet, comprising: a data pipeline having an input for receiving the encapsulation packet formatted as a sequence of parallel data segments (see paragraph [0076], lines 6-11, wherein the parallel data segments of the incoming packet are inputted to a data pipeline), said data pipeline including a plurality of pipeline stages (see paragraph [0078], lines 1-2, wherein the pipeline comprises a plurality of pipeline stages), each said pipeline stage for holding therein successive ones of said data segments (see paragraph [0078], lines 2-4,

wherein the data segments are stored in the pipeline stages); a modifier coupled to said data pipeline (see paragraph [0188], lines 1-2, protocol translator unit 315); and selection logic (see fig. 13, displaying the selection logic between pipeline stages) coupled between said data pipeline and said modifier for routing said first information from said data pipeline to said modifier (see fig. 11, displaying the packet between pipeline stages routed after the packet header is stripped based on the POPOFF field).

Lee fails to disclose one of said pipeline stages coupled to another of said pipeline stages for combining, in said another pipeline stage, part of a data segment currently held in said one pipeline stage with a data segment currently held is said another pipeline stage. Sayegh from the same or similar fields of endeavor teach one of said pipeline stages coupled to another of said pipeline stages for combining, in said another pipeline stage, part of a data segment currently held in said one pipeline stage with a data segment currently held is said another pipeline stage (see col. 9, lines 58-65, wherein the data in the stages of the pipelines are combined). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to incorporate the elements above stated by Sayegh in the network of Lee. The method taught by Sayegh is modified/implemented into the network of Lee by combining data segments. The motivation for one of said pipeline stages coupled to another of said pipeline stages for combining, in said another pipeline stage, part of a data segment currently held in said one pipeline stage with a data segment currently held is said another pipeline stage is to maintain a copy of the data at each stage of the pipeline.

For claim 17, Lee discloses a method of processing an encapsulation packet including an encapsulating header and an encapsulated packet, comprising: receiving the encapsulation packet formatted as a sequence of parallel data segments, said encapsulated packet including information for use in modifying said encapsulating header (see paragraph [0076], lines 6-11, wherein the parallel data segments of the incoming packet are inputted to a data pipeline); modifying said encapsulating header based on said parallel-formatted information (see paragraph [0188], lines 1-2, protocol translator unit 315).

Lee fails to disclose insuring that said information is available in said sequence of parallel data segments, including combining a first of said parallel data segments and part of a second of said parallel data segments at a position in said sequence occupied by said first parallel data segment. Sayegh from the same or similar fields of endeavor teach insuring that said information is available in said sequence of parallel data segments, including combining a first of said parallel data segments and part of a second of said parallel data segments at a position in said sequence occupied by said first parallel data segment (see col. 9, lines 58-65, wherein the data in the stages of the pipelines are combined). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to incorporate the elements above stated by Sayegh in the network of Lee. The method taught by Sayegh is modified/implemented into the network of Lee by combining data segments. The motivation for insuring that said information is available in said sequence of parallel data segments, including combining a first of said parallel data segments and part of a second of said parallel

data segments at a position in said sequence occupied by said first parallel data segment is said another pipeline stage is to maintain a copy of the data at each stage of the pipeline.

For claim 22, Lee discloses an apparatus for processing an encapsulation packet including an encapsulating header and an encapsulated packet, comprising: means for receiving the encapsulation packet formatted as a sequence of parallel data segments, said encapsulated packet including information for use in modifying said encapsulating header (see paragraph [0076], lines 6-11, wherein the parallel data segments of the incoming packet are inputted to a data pipeline), means for insuring that said information is available in said sequence of parallel data segments (see paragraph [0078], lines 1-2, wherein the pipeline comprises a plurality of pipeline stages); means for modifying said encapsulating header based on said parallel-formatted information (see paragraph [0188], lines 1-2, protocol translator unit 315).

Lee fails to disclose means for insuring that said information is available in said sequence of parallel data segments, including means for combining a first of said parallel data segments with a portion of a second of said parallel data segments. Sayegh from the same or similar fields of endeavor teach means for insuring that said information is available in said sequence of parallel data segments, including means for combining a first of said parallel data segments with a portion of a second of said parallel data segments (see col. 9, lines 58-65, wherein the data in the stages of the pipelines are combined). Thus, it would have been obvious to the person of ordinary

skill in the art at the time of the invention to incorporate the elements above stated by Sayegh in the network of Lee. The method taught by Sayegh is modified/implemented into the network of Lee by combining data segments. The motivation for a means for insuring that said information is available in said sequence of parallel data segments, including means for combining a first of said parallel data segments with a portion of a second of said parallel data segments is to maintain a copy of the data at each stage of the pipeline.

For claim 14, Sayegh teaches said one pipeline stage and said another pipeline stage are adjacent to one another in said data pipeline (see fig. 5, adjacent pipeline stages). Claim 18 is rejected for similar reasons.

For claim 15, Sayegh teaches said one pipeline stage is upstream from said another pipeline stage in said data pipeline (see fig. 5, each pipeline stage combining with the others). Claim 19 is rejected for similar reasons.

For claim 16, Sayegh teaches said part of said data segment currently held in said one pipeline stage includes a portion of said information (see col. 9, lines 58-65, wherein all the data is combined in each stage). Claim 20 is rejected for similar reasons.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Nelson, as applied to claim 1 above, and further in view of the admitted prior art.

For claim 6, Lee in view of Nelson fails to disclose said encapsulation packet is an OSI layer 2 packet, said encapsulating header is an OSI layer 2 header and said encapsulated packet is an OSI layer 3 packet. The admitted prior art from the same or similar fields of endeavor teach said encapsulation packet is an OSI layer 2 packet, said encapsulating header is an OSI layer 2 header and said encapsulated packet is an OSI layer 3 packet (see paragraph [0003], lines 3-6, wherein the encapsulation packet is OSI layer 2 with a layer 2 encapsulating header and layer 3 encapsulated packet). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to incorporate the elements above stated by the admitted prior art in the network of Lee in view of Nelson. The method taught by the admitted prior art is modified/implemented into the network of Lee in view of Nelson by using the OSI hierarchical model for the encapsulation packets. The motivation for combining the inventions is that Lee deals with pipelining encapsulation packets as described in the admitted prior art.

6. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Nelson, as applied to claim 1 above, and further in view of Dorsey et al. (cited 2001/0033580).

For claim 8, Lee in view of Nelson discloses an apparatus for processing an encapsulation packet including an encapsulating header and an encapsulated packet,

comprising: a data pipeline having an input for receiving the encapsulation packet formatted as a sequence of parallel data segments (see paragraph [0076], lines 6-11, wherein the parallel data segments of the incoming packet are inputted to a data pipeline), said data pipeline including a plurality of pipeline stages (see paragraph [0078], lines 1-2, wherein the pipeline comprises a plurality of pipeline stages), each said pipeline stage for holding therein successive ones of said data segments (see paragraph [0078], lines 2-4, wherein the data segments are stored in the pipeline stages); a modifier (see paragraph [0188], lines 1-2, protocol translator unit 315) coupled to said data pipeline for modifying said encapsulating header in response to first information contained in said encapsulated packet (see paragraph [0188], lines 1-5, wherein the modifying is stripping header information and the POPOFF field is the first information giving a starting point to begin stripping header bytes); and selection logic (see fig. 13, displaying the selection logic between pipeline stages) coupled between said data pipeline and said modifier, for routing said first information from said data pipeline to said modifier (see fig. 11, displaying the packet between pipeline stages routed after the packet header is stripped based on the POPOFF field).

Lee in view of Nelson fails to disclose at least one of said pipeline stages having a data width that is greater than said common data segment width for holding therein a portion of the encapsulation packet that is larger than said data segments. Dorsey from the same or similar fields of endeavor teach at least one of said pipeline stages having a data width that is greater than said common data segment width for holding therein a portion of the encapsulation packet that is larger than said data segments (see

paragraph 122, wherein the pipeline has variable widths). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to incorporate the elements above stated by Dorsey in the network of Lee in view of Nelson. The method taught by Dorsey is modified/implemented into the network of Lee in view of Nelson by setting different widths for the pipeline. The motivation for at least one of said pipeline stages having a data width that is greater than said common data segment width for holding therein a portion of the encapsulation packet that is larger than said data segments is to store data segments of various lengths.

For claim 9, Lee discloses said portion of the encapsulation packet includes one of said data segments and part of another of said data segments (see paragraph 77, wherein a group of segments are combined to create a single segment).

For claim 10, Lee discloses said part of said another data segment includes a portion of said information (see paragraph 78, wherein each data segment contains information).

For claim 11, Lee discloses said one and another data segments are adjacent to one another in said sequence (see paragraph 77, wherein the data segments are parallel).

For claim 12, Lee discloses said another data segment follows said one data segment in said sequence (see paragraph 77, wherein the parallel sequence of data segments includes one segment following another segment).

Allowable Subject Matter

7. Claim 24 is allowed.

Response to Arguments

8. Applicant's arguments with respect to the rejected claims have been considered but are moot in view of the new ground(s) of rejection.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dargaye H. Churnet whose telephone number is 571-270-1417. The examiner can normally be reached on Monday-Friday from 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag Shah can be reached on 571-272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dargaye H Churnet/

Examiner, Art Unit 2419

/Chirag G Shah/

Supervisory Patent Examiner, Art Unit 2419